

1FW16

**CRF Errors Edited by the STIC Systems  
Branch**

Serial Number: 08/916,140

CRF Edit Date: 10/8/04  
Edited by: R

Realigned nucleic acid/amino acid numbers/text in cases where the sequence  
text "wrapped" to the next line

**ENTERED**

Corrected the SEQ ID NO. Sequence numbers edited were:

\_\_\_\_\_

Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID  
NO's edited:

\_\_\_\_\_

Deleted: \_\_\_\_\_ invalid beginning/end-of-file text ; \_\_\_\_\_ page numbers

Inserted mandatory headings/numeric identifiers, specifically:

\_\_\_\_\_

Moved responses to same line as heading/numeric identifier, specifically:

\_\_\_\_\_

Other:

Sequence 7 - corrected spelling of "Beetle"

\_\_\_\_\_



IFW16

## RAW SEQUENCE LISTING

DATE: 10/08/2004

PATENT APPLICATION: US/08/916,140

TIME: 18:19:29

Input Set : A:\PTO.AMC.TXT

Output Set: N:\CRF4\10082004\H916140.raw

4 <110> APPLICANT: Scott Mathew P.  
 5 Goodrich, Lisa V.  
 6 Johnson, Ronald L.  
 7 Epstein, Ervin Jr.  
 9 <120> TITLE OF INVENTION: PATCHED GENES AND USES RELATED THERETO  
 12 <130> FILE REFERENCE: CIBT-P04-203  
 14 <140> CURRENT APPLICATION NUMBER: US 08/916,140  
 15 <141> CURRENT FILING DATE: 1997-08-21  
 17 <150> PRIOR APPLICATION NUMBER: US 08/656,055  
 18 <151> PRIOR FILING DATE: 1996-05-31  
 20 <150> PRIOR APPLICATION NUMBER: US 08/540,406  
 21 <151> PRIOR FILING DATE: 1995-10-06  
 23 <150> PRIOR APPLICATION NUMBER: US 08/319,745  
 24 <151> PRIOR FILING DATE: 1994-10-07  
 26 <160> NUMBER OF SEQ ID NOS: 64  
 28 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 30 <210> SEQ ID NO: 1  
 31 <211> LENGTH: 736  
 32 <212> TYPE: DNA  
 33 <213> ORGANISM: Beetle  
 35 <220> FEATURE:  
 37 <221> NAME/KEY: misc\_feature  
 38 <222> LOCATION: 4, 5, 7, 8, 10, 11, 23, 34, 35, 36, 39, 40, 41, 45, 51, 52,  
 39 57, 61, 71, 75, 77, 87, 88, 89, 91, 92, 96, 97, 100, 104,  
 40 106, 109, 111, 113, 117, 120, 126, 149, 151, 153, 154, 157,  
 41 178, 187, 189, 191, 211, 214, 310, 608, 704, 708, 712  
 42 <223> OTHER INFORMATION: n = A,T,C or G  
 44 <221> NAME/KEY: misc\_feature  
 45 <222> LOCATION: 714, 729, 732  
 46 <223> OTHER INFORMATION: n = A,T,C or G  
 W--> 48 <400> 1  
 W--> 49 aacnncnntn natggcaccc ccncccaacc tttnnncenn ntaancaaaa nccccnttt 60  
 50 nataccccct ntaananttt tccacchnc nnaaannccn ctgnanacna ngnaaannccn 120  
 51 tttttnaacc cccccaccc ggaattccna ntinnccccc ccaaattaca actccagncc 180  
 52 aaaattnana naattggtcc taacctaac natngttgtt acggtttccc cccccaaata 240  
 53 catgcactgg ccggaacact tgatcggtgc cgttccaata agaataaatc tggatcatatt 300  
 54 aaacaagccn aaagctttac aaactgttgt acaattaatg ggcgaacacg aactgttcga 360  
 55 attctggtct ggacattaca aagtgcacca catcggtatg aaccaggaga aggccacaac 420  
 56 cgtactgaac gcctggcaga agaagttcgc acaggttggt ggttgccgca aggagtagag 480  
 57 tgaatggtgg taatttttgg ttgttccagg aggtggatcg tctgacgaag agcaagaagt 540  
 58 cgtcgaatta catcttcgtg acgttctcca ccgccaat tgaacaagatg ttgaaggagg 600  
 59 cgtcgaanac ggacgtggtg aagctggggg tgggtgctgg ggtggcggcg gtgtacgggt 660  
 60 ggggtggccca gtcggggctg gctgccttgg gagtgcctgg cttngcgncc tncnatcgc 720

P.6

## RAW SEQUENCE LISTING

DATE: 10/08/2004

PATENT APPLICATION: US/08/916,140

TIME: 18:19:29

Input Set : A:\PTO.AMC.TXT

Output Set: N:\CRF4\10082004\H916140.raw

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61 cctatagtna gncgta
63 <210> SEQ ID NO: 2
64 <211> LENGTH: 107
65 <212> TYPE: PRT
66 <213> ORGANISM: Beetle
68 <220> FEATURE:
70 <221> NAME/KEY: VARIANT
71 <222> LOCATION: 1, 9, 12, 13, 14, 20
72 <223> OTHER INFORMATION: Xaa = Any Amino Acid
74 <400> SEQUENCE: 2
W--> 75 Xaa Pro Pro Pro Asn Tyr Asn Ser Xaa Pro Lys Xaa Xaa Xaa Leu Val
76 1 5 10 15
77 Leu Thr Pro Xaa Val Val Thr Val Ser Pro Pro Lys Tyr Met His Trp
78 20 25 30
79 Pro Glu His Leu Ile Val Ala Val Pro Ile Arg Ile Asn Leu Val Ile
80 35 40 45
81 Leu Asn Lys Pro Lys Ala Leu Gln Thr Val Val Gln Leu Met Gly Glu
82 50 55 60
83 His Glu Leu Phe Glu Phe Trp Ser Gly His Tyr Lys Val His His Ile
84 65 70 75 80
85 Gly Trp Asn Gln Glu Lys Ala Thr Thr Val Leu Asn Ala Trp Gln Lys
86 85 90 95
87 Lys Phe Ala Gln Val Gly Gly Trp Arg Lys Glu
88 100 105
91 <210> SEQ ID NO: 3
92 <211> LENGTH: 5187
93 <212> TYPE: DNA
94 <213> ORGANISM: Butterfly
96 <400> SEQUENCE: 3
97 ggggtctgtca cccggagccg gagtccccgg cggccagcag cgtcctcgcg agccgagcgc 60
98 ccaggcgcgc ccggagcccc cggcggcggc ggcaacatgg cctcggctgg taacgccgcc 120
99 ggggccttg gtaggcaggc cggcggcggg aggcgcagac ggaccggggg accgcaccgc 180
100 gccgcgccg accgggacta tctgcaccgg cccagctact gcgacgccgc cttcgctctg 240
101 gacgagattt ccaaggggaa ggctactggc cggaaaagcg cgctgtggct gagagcgaag 300
102 tttcagagac tcttatttaa actgggttgt tacattcaaa agaactgcgg caagtttttg 360
103 gttgtgggtc tcctcatatt tggggccttc gctgtgggat taaaggcagc taatctcgag 420
104 accaacgtgg aggagctgtg ggtggaagtt ggtggacgag tgagtcgaga attaaattat 480
105 acccgtcaga agataggaga agaggctatg tttaatctc aactcatgat acagactcca 540
106 aaagaagaag gcgctaagt tctgaccaca gaggtctctc tgcaacacct ggactcagca 600
107 ctccaggcca gtcgtgtgca cgtctacatg tataacaggc aatggaagtt ggaacatttg 660
108 tgctacaaat caggggaact tatcacggag acaggttaca tggatcagat aatagaatac 720
109 ctttaccctt gcttaatcat tacacctttg gactgcttct gggaaggggc aaagctacag 780
110 tccgggacag catacctcct aggttaagcct cctttacggg ggacaaactt tgacccttg 840
111 gaattcctag aagagttaaa gaaaataaac taccaagtgg acagctggga ggaaatgctg 900
112 aataaagccg aagttggcca tgggtacatg gaccggcctt gcctcaacc agccgaccca 960
113 gattgccttg ccacagcccc taacaaaaat tcaaccaaac ctcttgatgt ggcccttggt 1020
114 ttgaatggtg gatgtcaagg ttatccagg aagtatatgc attggcagga ggagttgatt 1080
115 gtgggtggta ccgtcaagaa tgccactgga aaacttgtca gcgctcacgc cctgcaaacc 1140
116 atgttcagt taatgactcc caagcaaatg tatgaacact tcaggggcta cgactatgtc 1200

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## RAW SEQUENCE LISTING

DATE: 10/08/2004

PATENT APPLICATION: US/08/916,140

TIME: 18:19:29

Input Set : A:\PTO.AMC.TXT

Output Set: N:\CRF4\10082004\H916140.raw

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117 tctcacatca actggaatga agacagggca gccgccatcc tggaggcctg gcagaggact 1260
118 tacgtggagg tggttcatca aagtgtcgcc ccaaactcca ctcaaaagggt gcttcccttc 1320
119 acaaccacga cctggacga catcctaaaa tccttctctg atgtcagtggt catccgagtg 1380
120 gccagcggtt acctactgat gcttgccatg gccgtgttaa ccatgctgcg ctgggactgc 1440
121 tccaagtccc aggggtgccgt ggggctggct ggcgtcctgt tgggtgcgct gtcagtggct 1500
122 gcaggattgg gcctctgctc cttgattggc atttctttta atgctgcgac aactcagggt 1560
123 ttgccgtttc ttgctcttgg tgttggtgtg gatgatgtct tcctcctggc ccatgcattc 1620
124 agtgaacacg gacagaataa gaggattcca tttgaggaca ggactgggga gtgcctcaag 1680
125 cgcaccggag ccagcgtggc cctcacctcc atcagcaatg tcaccgcctt cttcatggcc 1740
126 gcattgatcc ctatccctgc cctgcgagcg ttctccctcc aggtgctgt ggtgggtgta 1800
127 ttcaattttg ctatgggtct gctcattttt cctgcaattc tcagcatgga tttatacaga 1860
128 cgtgaggaca gaagattgga tattttctgc tgtttcacia gccctgtgt cagcagggtg 1920
129 attcaagttg agccacaggc ctacacagag cctcacagta acaccggta cagcccccca 1980
130 ccccatatac ccagccacag cttegccac gaaaccata tcactatgca gtccaccgtt 2040
131 cagctccgca cagagtatga cctcacacg cagtggtact acaccaccgc cgagccacgc 2100
132 tctgagatct ctgtacagcc tgttaccgtc acccaggaca acctcagctg tcagagtccc 2160
133 gagagcacca gctctaccag ggacctgctc tccagttct cagactccag cctccactgc 2220
134 ctcgagcccc aactgaccaa gtggacactc tcttcgtttg cagagaagca ctatgctcct 2280
135 ttctcctgga aaccctaaag caagggtgtg gtaatccttc tttcctggg cttgctgggg 2340
136 gtcagccttt atgggaccac ccgagtgaga gacgggctgg acctcacgga cattgttccc 2400
137 cgggaaacca gagaatatga cttcatagct gccagttca agtacttctc tttctacaac 2460
138 atgtatatag tcaccagaa agcagactac ccgaatatcc agcacctact ttacgacctt 2520
139 cataagagtt tcagcaatgt gaagtatgtc atgctggagg agaacaagca acttcccca 2580
140 atgtggctgc actactttag agactggctt caaggacttc aggatgcatt tgacagtgc 2640
141 tgggaaactg ggaggatcat gccaaacaat tataaaaatg gatcagatga cggggctcctc 2700
142 gcttacaac tcctggtgca gactggcagc cgagacaagc ccatcgacat tagtcagttg 2760
143 actaaacagc gtctggtaga cgcagatggc atcattaatc cgagcgcttt ctacatctac 2820
144 ctgaccgctt gggtcagcaa cgacctgtg gcttacgctg cctcccaggc caacatccgg 2880
145 cctcaccggc cggagtgggt ccatgacaaa gccgactaca tgccagagac caggtgaga 2940
146 atcccagcag cagagcccat cgagtacgt cagttccctt tctacctcaa cggcctacga 3000
147 gacacctcag actttgtgga agccatagaa aaagtgaag tcactgttaa caactatacg 3060
148 agcctgggac tgtccagcta ccccaatggc tacccttcc tgttctggga gcaatacatc 3120
149 agcctgcgac actggtgct gctatccatc agcgtgggtg tggcctgcac gtttctagt 3180
150 tgcgcagtct tcctcctgaa cccctggacg gccgggatca ttgtcatggt cctggctctg 3240
151 atgaccgttg agctctttgg catgatgggc ctcattggga tcaagctgag tgctgtgct 3300
152 gtggctatcc tgattgcac tgttggcatc ggagtggagt tcaccgtcca cgtggctttg 3360
153 gcctttctga cagccattgg ggacaagaac cacagggcta tgctcgctct ggaacacatg 3420
154 tttgctcccg ttctggacgg tgcgtgtcc actctgctgg gtgtactgat gcttgcaggg 3480
155 tccgaatttg atttcattgt cagatacttc tttgccgtcc tggccattct caccgtcttg 3540
156 ggggttctca atggactgg tctgctgct gtcctcttat ccttctttgg accgtgtcct 3600
157 gaggtgtctc cagccaatgg cctaaccga ctgccactc cttcgctga gccgcctcca 3660
158 agtgtcgtcc ggtttgccgt gcctcctggt cacacgaaca atgggtctga ttccctccgac 3720
159 tcggagtaca gctctcagac cacggtgtct ggcacagtg aggagctcag gcaatacgaa 3780
160 gcacagcagg gtgccggagg ccctgccac caagtgattg tggaagccac agaaaacct 3840
161 gtctttgccc ggtccactgt ggtccatccg gactccagac atcagcctcc cttgacctc 3900
162 cggcaacagc cccacctgga ctctggctcc ttgtccctg gacggcaagg ccagcagcct 3960
163 cgaagggatc cccctagaga aggcttgccg ccacccctc acagaccgcg cagagacgct 4020
164 tttgaaattt ctactgaagg gcattctggc cctagcaata gggaccgctc agggccccgt 4080
165 ggggcccgtt ctcacaacct tcggaacca acgtccaccg ccatgggcag ctctgtgccc 4140

```

## RAW SEQUENCE LISTING

DATE: 10/08/2004

PATENT APPLICATION: US/08/916,140

TIME: 18:19:29

Input Set : A:\PTO.AMC.TXT

Output Set: N:\CRF4\10082004\H916140.raw

```

166 agctactgcc agcccatcac cactgtgacg gcttctgctt cggtgactgt tgctgtgcat 4200
167 cccccgctg gacctgggcg caacccccga ggggggcctt gtccaggcta tgagagctac 4260
168 cctgagactg atcacggggt atttgaggat cctcatgtgc ctttcatgt cagggtgtgag 4320
169 aggagggact caaagggtga ggtcatagag ctacaggacg tggaatgtga ggagaggccg 4380
170 tgggggagca gctccaactg agggtaatta aaatctgaag caaagaggcc aaagattgga 4440
171 aagccccgcc ccacactctt tccagaactg cttgaagaga actgcttggg attatgggaa 4500
172 ggcagttcat tgttactgta actgattgta ttattkkggtg aaatatttct ataaatattt 4560
173 aaragggtga cacatgtaat atacatggaa atgctgtaca gtctatttcc tggggcctct 4620
174 ccaactcctgc ccagagtggt ggagaccaca ggggcccttt cccctgtgta cattgggtctc 4680
175 tgtgccacaa ccaagcttaa cttagtttta aaaaaaatct cccagcatat gtcgctgctg 4740
176 cttaaatatt gtataattta cttgtataat tctatgcaaa tattgcttat gtaataggat 4800
177 tatttgtaaa ggtttctgtt taaaatattt taaatttgca tatcacaacc ctgtggtagg 4860
178 atgaattggt actgttaact tttgaacacg ctatgcgtgg taattgttta acgagcagac 4920
179 atgaagaaaa cagggttaatc ccagtggtct ctctaggggt agttgtatat gggtcgcagt 4980
180 ggtggatgtg tgtgtgcatg tgactttcca atgtactgta ttgtggtttg ttgttggtgt 5040
181 tgctgttggt gttcattttg gtgtttttgg ttgctttgta tgatcttagc tctggcctag 5100
182 gtgggctggg aagggtccagg tcttttctg tcgtgatgct ggtggaaagg tgaccccaat 5160
183 catctgtcct attctctggg actattc

```

5187

185 &lt;210&gt; SEQ ID NO: 4

186 &lt;211&gt; LENGTH: 1311

187 &lt;212&gt; TYPE: PRT

188 &lt;213&gt; ORGANISM: Butterfly

190 &lt;220&gt; FEATURE:

192 &lt;221&gt; NAME/KEY: VARIANT

193 &lt;222&gt; LOCATION: 348, 908

194 &lt;223&gt; OTHER INFORMATION: Xaa = Any Amino Acid

196 &lt;400&gt; SEQUENCE: 4

```

197 Met Val Ala Pro Asp Ser Glu Ala Pro Ser Asn Pro Arg Ile Thr Ala
198 1 5 10 15
199 Ala His Glu Ser Pro Cys Ala Thr Glu Ala Arg His Ser Ala Asp Leu
200 20 25 30
201 Tyr Ile Arg Thr Ser Trp Val Asp Ala Ala Leu Ala Leu Ser Glu Leu
202 35 40 45
203 Glu Lys Gly Asn Ile Glu Gly Gly Arg Thr Ser Leu Trp Ile Arg Ala
204 50 55 60
205 Trp Leu Gln Glu Gln Leu Phe Ile Leu Gly Cys Phe Leu Gln Gly Asp
206 65 70 75 80
207 Ala Gly Lys Val Leu Phe Val Ala Ile Leu Val Leu Ser Thr Phe Cys
208 85 90 95
209 Val Gly Leu Lys Ser Ala Gln Ile His Thr Arg Val Asp Gln Leu Trp
210 100 105 110
211 Val Gln Glu Gly Gly Arg Leu Glu Ala Glu Leu Lys Tyr Thr Ala Gln
212 115 120 125
213 Ala Leu Gly Glu Ala Asp Ser Ser Thr His Gln Leu Val Ile Gln Thr
214 130 135 140
215 Ala Lys Asp Pro Asp Val Ser Leu Leu His Pro Gly Ala Leu Leu Glu
216 145 150 155 160
217 His Leu Lys Val Val His Ala Ala Thr Arg Val Thr Val His Met Tyr
218 165 170 175

```

## RAW SEQUENCE LISTING

DATE: 10/08/2004

PATENT APPLICATION: US/08/916,140

TIME: 18:19:29

Input Set : A:\PTO.AMC.TXT

Output Set: N:\CRF4\10082004\H916140.raw

```

219 Asp Ile Glu Trp Arg Leu Lys Asp Leu Cys Tyr Ser Pro Ser Ile Pro
220      180      185      190
221 Asp Phe Glu Gly Tyr His His Ile Glu Ser Ile Ile Asp Asn Val Ile
222      195      200      205
223 Pro Cys Ala Ile Ile Thr Pro Leu Asp Cys Phe Trp Glu Gly Ser Lys
224      210      215      220
225 Leu Leu Gly Pro Asp Tyr Pro Ile Tyr Val Pro His Leu Lys His Lys
226 225      230      235      240
227 Leu Gln Trp Thr His Leu Asn Pro Leu Glu Val Val Glu Glu Val Lys
228      245      250      255
229 Lys Leu Lys Phe Gln Phe Pro Leu Ser Thr Ile Glu Ala Tyr Met Lys
230      260      265      270
231 Arg Ala Gly Ile Thr Ser Ala Tyr Met Lys Lys Pro Cys Leu Asp Pro
232      275      280      285
233 Thr Asp Pro His Cys Pro Ala Thr Ala Pro Asn Lys Lys Ser Gly His
234      290      295      300
235 Ile Pro Asp Val Ala Ala Glu Leu Ser His Gly Cys Tyr Gly Phe Ala
236 305      310      315      320
237 Ala Ala Tyr Met His Trp Pro Glu Gln Leu Ile Val Gly Gly Ala Thr
238      325      330      335
-> 239 Arg Asn Ser Thr Ser Ala Leu Arg Lys Ala Arg Xaa Leu Gln Thr Val
240      340      345      350
241 Val Gln Leu Met Gly Glu Arg Glu Met Tyr Glu Tyr Trp Ala Asp His
242      355      360      365
243 Tyr Lys Val His Gln Ile Gly Trp Asn Gln Glu Lys Ala Ala Ala Val
244      370      375      380
245 Leu Asp Ala Trp Gln Arg Lys Phe Ala Ala Glu Val Arg Lys Ile Thr
246 385      390      395      400
247 Thr Ser Gly Ser Val Ser Ser Ala Tyr Ser Phe Tyr Pro Phe Ser Thr
248      405      410      415
249 Ser Thr Leu Asn Asp Ile Leu Gly Lys Phe Ser Glu Val Ser Leu Lys
250      420      425      430
251 Asn Ile Ile Leu Gly Tyr Met Phe Met Leu Ile Tyr Val Ala Val Thr
252      435      440      445
253 Leu Ile Gln Trp Arg Asp Pro Ile Arg Ser Gln Ala Gly Val Gly Ile
254      450      455      460
255 Ala Gly Val Leu Leu Leu Ser Ile Thr Val Ala Ala Gly Leu Gly Phe
256 465      470      475      480
257 Cys Ala Leu Leu Gly Ile Pro Phe Asn Ala Ser Ser Thr Gln Ile Val
258      485      490      495
259 Pro Phe Leu Ala Leu Gly Leu Gly Val Gln Asp Met Phe Leu Leu Thr
260      500      505      510
261 His Thr Tyr Val Glu Gln Ala Gly Asp Val Pro Arg Glu Glu Arg Thr
262      515      520      525
263 Gly Leu Val Leu Lys Lys Ser Gly Leu Ser Val Leu Leu Ala Ser Leu
264      530      535      540
265 Cys Asn Val Met Ala Phe Leu Ala Ala Ala Leu Leu Pro Ile Pro Ala
266 545      550      555      560
267 Phe Arg Val Phe Cys Leu Gln Ala Ala Ile Leu Leu Leu Phe Asn Leu

```

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/08/916,140

DATE: 10/08/2004  
TIME: 18:19:30

Input Set : A:\PTO.AMC.TXT

Output Set: N:\CRF4\10082004\H916140.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 4,5,7,8,10,11,23,34,35,36,39,40,41,45,51,52,57,61,71,75,77  
Seq#:1; N Pos. 87,88,89,91,92,96,97,100,104,106,109,111,113,117,120,126,149  
Seq#:1; N Pos. 151,153,154,157,178,187,189,191,211,214,310,608,704,708,712  
Seq#:1; N Pos. 714,729,732  
Seq#:2; Xaa Pos. 1,9,12,13,14,20  
Seq#:4; Xaa Pos. 348,908  
Seq#:7; N Pos. 114,225,261  
Seq#:8; Xaa Pos. 75,87  
Seq#:14; N Pos. 16,25  
Seq#:15; N Pos. 24  
Seq#:16; N Pos. 13,16  
Seq#:17; N Pos. 20

## VERIFICATION SUMMARY

DATE: 10/08/2004

PATENT APPLICATION: US/08/916,140

TIME: 18:19:30

Input Set : A:\PTO.AMC.TXT

Output Set: N:\CRF4\10082004\H916140.raw

L:48 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1  
L:49 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0  
M:341 Repeated in SeqNo=1  
L:75 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0  
M:341 Repeated in SeqNo=2  
L:239 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:336  
M:341 Repeated in SeqNo=4  
L:627 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:60  
M:341 Repeated in SeqNo=7  
L:653 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:64  
M:341 Repeated in SeqNo=8  
L:992 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:996 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:14  
L:997 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0  
L:1007 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1011 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:15  
L:1012 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0  
L:1022 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1026 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:16  
L:1027 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0  
L:1037 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1041 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:17  
L:1042 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0



IFW16

## RAW SEQUENCE LISTING

DATE: 10/07/2004

PATENT APPLICATION: US/08/916,140

TIME: 10:36:12

Input Set : A:\CIBT-P04-203.TXT

Output Set: N:\CRF4\10072004\H916140.raw

4 <110> APPLICANT: Scott Mathew P.  
 5 Goodrich, Lisa V.  
 6 Johnson, Ronald L.  
 7 Epstein, Ervin Jr.  
 9 <120> TITLE OF INVENTION: PATCHED GENES AND USES RELATED THERETO  
 12 <130> FILE REFERENCE: CIBT-P04-203  
 14 <140> CURRENT APPLICATION NUMBER: US 08/916,140  
 15 <141> CURRENT FILING DATE: 1997-08-21  
 17 <150> PRIOR APPLICATION NUMBER: US 08/656,055  
 18 <151> PRIOR FILING DATE: 1996-05-31  
 20 <150> PRIOR APPLICATION NUMBER: US 08/540,406  
 21 <151> PRIOR FILING DATE: 1995-10-06  
 23 <150> PRIOR APPLICATION NUMBER: US 08/319,745  
 24 <151> PRIOR FILING DATE: 1994-10-07  
 26 <160> NUMBER OF SEQ ID NOS: 64  
 28 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
 30 <210> SEQ ID NO: 1  
 31 <211> LENGTH: 736  
 32 <212> TYPE: DNA  
 33 <213> ORGANISM: Beetle  
 35 <220> FEATURE:  
 37 <221> NAME/KEY: misc feature  
 38 <222> LOCATION: 4, 5, 7, 8, 10, 11, 23, 34, 35, 36, 39, 40, 41, 45, 51, 52,  
 39 57, 61, 71, 75, 77, 87, 88, 89, 91, 92, 96, 97, 100, 104,  
 40 106, 109, 111, 113, 117, 120, 126, 149, 151, 153, 154, 157,  
 41 178, 187, 189, 191, 211, 214, 310, 608, 704, 708, 712  
 42 <223> OTHER INFORMATION: n = A,T,C or G  
 44 <221> NAME/KEY: misc feature  
 45 <222> LOCATION: 714, 729, 732  
 46 <223> OTHER INFORMATION: n = A,T,C or G

Does Not Comply  
 Corrected Diskette Needed

W--> 48 <400> 1  
 W--> 49 aacnncnntn natggcacc cncccaacc tttnnncnn ntaancaaaa nccccnttt 60  
 W--> 50 nataccccct ntaananttt tccaccnnc nnaaanncn ctgnanacna ngnaaanccn 120  
 W--> 51 tttttnaacc cccccacc ggaattccna ntncncncc ccaaattaca actccagncc 180  
 W--> 52 aaaattnana naattggtcc taacctaac natngttgtt acggtttccc ccccaata 240  
 53 catgcactgg cccgaacact tgatcggtgc cgttccaata agaataaatc tggatcatatt 300  
 W--> 54 aaacaagccn aaagctttac aaactgttgt acaattaatg ggcgaacacg aactgttcga 360  
 55 attctggtct ggacattaca aagtgcacca catcggtatg aaccaggaga aggccacaac 420  
 56 cgtactgaac gcctggcaga agaagttcgc acaggttggt ggttggcgca aggagtagag 480  
 57 tgaatggtgg taatttttgg ttgttccagg aggtggatcg tctgacgaag agcaagaagt 540  
 58 cgtcgaatta catcttcgtg acgttctcca ccgccaattt gaacaagatg ttgaaggagg 600  
 W--> 59 cgtcgaanac ggacgtggtg aagctggggg tggtgctggg ggtggcggcg gtgtacgggt 660  
 W--> 60 gggtagccca gtcggggctg gctgccttgg gagtgtgtgt cttngcngc tncnattegc 720

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/08/916,140

DATE: 10/07/2004

TIME: 10:36:12

Input Set : A:\CIBT-P04-203.TXT

Output Set: N:\CRF4\10072004\H916140.raw

W--> 61 cctatagtna gncgta 736

63 <210> SEQ ID NO: 2

64 <211> LENGTH: 107

65 <212> TYPE: PRT

66 <213> ORGANISM: Beetle

68 <220> FEATURE:

70 <221> NAME/KEY: VARIANT

71 <222> LOCATION: 1, 9, 12, 13, 14, 20

72 <223> OTHER INFORMATION: Xaa = Any Amino Acid

74 <400> SEQUENCE: 2

W--> 75 Xaa Pro Pro Pro Asn Tyr Asn Ser Xaa Pro Lys Xaa Xaa Xaa Leu Val

76 1 5 10 15

W--> 77 Leu Thr Pro Xaa Val Val Thr Val Ser Pro Pro Lys Tyr Met His Trp

78 20 25 30

79 Pro Glu His Leu Ile Val Ala Val Pro Ile Arg Ile Asn Leu Val Ile

80 35 40 45

81 Leu Asn Lys Pro Lys Ala Leu Gln Thr Val Val Gln Leu Met Gly Glu

82 50 55 60

83 His Glu Leu Phe Glu Phe Trp Ser Gly His Tyr Lys Val His His Ile

84 65 70 75 80

85 Gly Trp Asn Gln Glu Lys Ala Thr Thr Val Leu Asn Ala Trp Gln Lys

86 85 90 95

87 Lys Phe Ala Gln Val Gly Gly Trp Arg Lys Glu

88 100 105

91 <210> SEQ ID NO: 3

92 <211> LENGTH: 5187

93 <212> TYPE: DNA

94 <213> ORGANISM: Butterfly

96 <400> SEQUENCE: 3

97 ggggtctgtca cccggagccg gagtccccgg cggccagcag egteectcgcg agccgagcgc 60

98 ccaggcgcg cccggagccc cggcgccggc ggcaacatgg cctcggttg taacgccgcc 120

99 ggggcccttg gcaggcaggc cggcgccggg aggcgcagac ggaccggggg accgcaccgc 180

100 gccgcgccg accgggacta tctgcaccgg cccagctact gcgacgccgc cttegtctg 240

101 gaggcagattt ccaaggggaa ggctactggc cggaaagcgc cgctgtggct gagagcgaag 300

102 ttccagagac tcttatttaa actgggttgt tacattcaaa agaactgcgg caagttttg 360

103 gttgtgggtc tctcatatt tggggccttc gctgtgggat taaaggcagc taatctcgag 420

104 accaactgtg agggagctgt ggtggaagtt ggtggacgag tgagtcgaga attaaattat 480

105 acccgtcaga agataggaga agaggctatg tttaatectc aactcatgat acagactcca 540

106 aaagaagaag gcgctaattg tctgaccaca gaggetctcc tgcaaacact ggactcagca 600

107 ctccaggcca gtcgtgtgca cgtctacatg tataacaggc aatggaagtt ggaacatttg 660

108 tgctacaaat caggggaaact tatcacggag acaggttaca tggatcagat aatagaatac 720

109 ctttaccctt gcttaatcat tacacctttg gactgcttct ggggaagggg aaagctacag 780

110 tccgggacag catacctcct aggtaagcct cttttacggg ggacaaactt tgaccccttg 840

111 gaattcctag aagagttaaa gaaaataaac taccaagtgg acagctggga ggaaatgctg 900

112 aataaagccg aagttggcca tgggtacatg gaccggcctt gcctcaaccc agccgaccca 960

113 gattgccctg ccacagcccc taacaaaaat tcaacaaaac ctcttgatgt ggcccttggt 1020

114 ttgaatggtg gatgtcaagg tttatccagg aagtatatgc attggcagga ggagttgatt 1080

115 gtgggtggtg ccgtcaagaa tgccactgga aaacttgtca gcgtcacgc cctgcaaacc 1140

116 atgttccagt taatgactcc caagcaaatg tatgaacaat tcaggggcta cgactatgtc 1200

## RAW SEQUENCE LISTING

DATE: 10/07/2004

PATENT APPLICATION: US/08/916,140

TIME: 10:36:12

Input Set : A:\CIBT-P04-203.TXT

Output Set: N:\CRF4\10072004\H916140.raw

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117 tctcacatca actggaatga agacagggca gccgccatcc tggaggcctg gcagaggact 1260
118 tacgtggagg tggttcatca aagtgtcgcc ccaaactcca ctcaaaaggt gcttcccttc 1320
119 acaaccacga ccctggacga catcctaaaa tecttctctg atgtcagtgt catccgagtg 1380
120 gccagcggct acctactgat gcttgccatg gccgtgttaa ccagtctgcg ctgggactgc 1440
121 tccaagtccc aggggtgccg ggggctggct ggcgtccctgt tgggtgcgct gtcagtggct 1500
122 gcaggattgg gcctctgctc ctgtattggc atttctttta atgctgcgac aactcagggt 1560
123 ttgccgtttc ttgctcttgg tgttggtgtg gatgatgtct tcctcctggc ccagtcatte 1620
124 agtgaaacag gacagaataa gaggattcca tttgaggaca ggactgggga gtgcctcaag 1680
125 cgcaccggag ccagcgtggc cctcacctcc atcagcaatg tcaccgcctt cttcatggcc 1740
126 gcattgatcc ctatccctgc cctgcgagcg ttctccctcc aggtctgtgt ggtggtggtg 1800
127 ttcaattttg ctatggttct gctcattttt cctgcaattc tcagcatgga tttatacaga 1860
128 cgtgaggaca gaagattgga tattttctgc tgtttcaca gcccctgtgt cagcagggtg 1920
129 attcaagttg agccacaggc ctacacagag cctcacagta acacccggtg cagcccccca 1980
130 ccccatatac ccagccacag ctctgcccac gaaaccata tcactatgca gtccaccgtt 2040
131 cagctccgca cagagtatga ccctcacacg cacgtgtact acaccaccgc cgagccacgc 2100
132 tctgagatct ctgtacagcc tgttaccgct acccaggaca acctcagctg tcagagtccc 2160
133 gagagcacca gctctaccag ggacctgctc tcccagttct cagactccag cctccactgc 2220
134 ctcgagcccc cctgcaccaa gtggacactc tcttcgtttg cagagaagca ctatgctcct 2280
135 ttctctctga aacccaaagc caaggttgtg gtaatccttc tttctctggg ctgtctgggg 2340
136 gtcagccttt atgggaccac ccgagtgaga gacgggttg accctcacga cattgttccc 2400
137 cgggaaacca gagaatatga ctctcatgct gccagttca agtacttctc tttctacaac 2460
138 atgtatatag tcaccagaa agcagactac ccgaatatcc agcacctact ttacgacctt 2520
139 cataagagtt tcagcaatgt gaagtatgtc atgctggagg agaacaagca acttccccaa 2580
140 atgtggctgc actactttag agactggctt caaggacttc aggatgcatt tgacagtgc 2640
141 tgggaaactg ggaggatcat gccaaacaat tataaaaatg gatcagatga cgggggtctc 2700
142 gcttacaaac tctgtgtgca gactggcagc cgagacaagc ccacgcacat tagtcagttg 2760
143 actaaacagc gtctggtaga cgcagatggc atcattaatc cgagcgttt ctacatctac 2820
144 ctgaccgctt gggtcagcaa cgaccctgta gcttacgctg cctcccaggc caacatccgg 2880
145 cctcaccggc cggagtgggt ccatgacaaa gccgactaca tgccagagac caggctgaga 2940
146 atcccagcag cagagcccac cgagtacgct cagttccctt tctacctcaa cggcctacga 3000
147 gacacctcag actttgtgga agccatagaa aaagtgagag tcatctgtaa caactatacg 3060
148 agcctgggac tgtccagcta ccccaatggc tacccttcc tgttctggga gcaatacatc 3120
149 agcctgcgcc actggctgct gctatccatc agegtgggtg tggcctgcac gtttctagt 3180
150 tgcgcagtct tctcctgaa cccctggacg gccgggatca ttgtcatggt cctggctctg 3240
151 atgaccgttg agctctttgg catgatgggc ctcatggga tcaagctgag tgctgtgcct 3300
152 gtggatcatc tgattgcatc tgttggcatc ggagtggagt tcaccgtcca cgtggctttg 3360
153 gcctttctga cagccattgg ggacaagaac cacagggtca tgctcgctct ggaacacatg 3420
154 tttgctcccg ttctggacgg tgctgtgtcc actctgctgg gtgtactgat gcttgcaggg 3480
155 tccgaatttg atttcattgt cagatacttc tttgcgctcc tggccattct caccgtcttg 3540
156 ggggttctca atggactggt tctgctgctt gtctcttat ccttctttgg accgtgtcct 3600
157 gaggtgtctc cagccaatgg cctaaaccga ctgcccactc cttcgctga gccgcctcca 3660
158 agtgtcgtcc ggtttgccgt gctcctggt cacacgaaca atgggtctga ttcctccgac 3720
159 tcggagtaca gctctcagac cacggtgtct ggcacagtg aggagctcag gcaatacgaa 3780
160 gcacagcagg gtgccggagg ccctgccac caagtgattg tggagccac agaaaaccct 3840
161 gtctttgccc ggtccactgt ggtccatccg gactccagac atcagcctcc cttgaccct 3900
162 cggcaacagc cccacctgga ctctggctcc ttgtccctg gacggcaagg ccagcagcct 3960
163 cgaagggatc cccctagaga aggtttgcgg ccacccccct acagaccgcg cagagacgct 4020
164 tttgaaattt ctactgaagg gcattctggc cctagcaata gggaccgctc agggccccgt 4080
165 ggggccccgt ctcaaaccc tcggaaccca acgtccaccg ccatgggcag ctctgtgcc 4140

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/08/916,140

DATE: 10/07/2004

TIME: 10:36:12

Input Set : A:\CIBT-P04-203.TXT

Output Set: N:\CRF4\10072004\H916140.raw

```

166 agctactgcc agcccatcac cactgtgacg gcttctgctt cggtgactgt tgctgtgcat 4200
167 cccccgcctg gacctgggcg caacccccga ggggggcccct gtccaggcta tgagagctac 4260
168 cctgagactg atcacggggt atttgaggat cctcatgtgc cttttcatgt cagggtgtgag 4320
169 aggagggact caaaggtgga ggtcatagag ctacaggacg tggaatgtga ggagaggccg 4380
170 tggggggagca gctccaactg agggtaatta aaatctgaag caaagaggcc aaagattgga 4440
171 aagccccgcc ccacactctt tccagaactg cttgaagaga actgcttgga attatgggaa 4500
172 ggcagttcat tgttactgta actgattgta ttattkkgtg aaatatttct ataaatattt 4560
173 aaragggtgta cacatgtaat atacatggaa atgctgtaca gtctatttcc tggggcctct 4620
174 ccactcctgc ccagagtgg ggagaccaca gggggcccttt cccctgtgta cattgggtctc 4680
175 tgtgccacaa ccaagcttaa cttagtttta aaaaaaatct ccagcatat gtcgctgctg 4740
176 cttaaattatt gtataattta cttgtataat tctatgcaaa tattgcttat gtaaataggat 4800
177 tatttgtaaa ggtttctggt taaaatattt taaatttgca tatcacaacc ctgtggtagg 4860
178 atgaattggt actgttaact tttgaacacg ctatgcgtgg taattgttta acgagcagac 4920
179 atgaagaaaa cagggttaatc ccagtggctt ctctaggggt agttgtatat ggttcgcatg 4980
180 ggtggatgtg tgtgtgcatg tgactttcca atgtactgta ttgtggtttg ttgttgttgt 5040
181 tgctgttgtt gttcattttg gtgtttttgg ttgctttgta tgatcttagc tctggcctag 5100
182 gtgggctggg aaggtccagg tctttttctg tcgtgatgct ggtggaaagg tgaccccaat 5160
183 catctgtcct attctctggg actattc 5187

```

185 &lt;210&gt; SEQ ID NO: 4

186 &lt;211&gt; LENGTH: 1311

187 &lt;212&gt; TYPE: PRT

188 &lt;213&gt; ORGANISM: Butterfly

190 &lt;220&gt; FEATURE:

192 &lt;221&gt; NAME/KEY: VARIANT

193 &lt;222&gt; LOCATION: 348, 908

194 &lt;223&gt; OTHER INFORMATION: Xaa = Any Amino Acid

196 &lt;400&gt; SEQUENCE: 4

```

197 Met Val Ala Pro Asp Ser Glu Ala Pro Ser Asn Pro Arg Ile Thr Ala
198 1 5 10 15
199 Ala His Glu Ser Pro Cys Ala Thr Glu Ala Arg His Ser Ala Asp Leu
200 20 25 30
201 Tyr Ile Arg Thr Ser Trp Val Asp Ala Ala Leu Ala Leu Ser Glu Leu
202 35 40 45
203 Glu Lys Gly Asn Ile Glu Gly Gly Arg Thr Ser Leu Trp Ile Arg Ala
204 50 55 60
205 Trp Leu Gln Glu Gln Leu Phe Ile Leu Gly Cys Phe Leu Gln Gly Asp
206 65 70 75 80
207 Ala Gly Lys Val Leu Phe Val Ala Ile Leu Val Leu Ser Thr Phe Cys
208 85 90 95
209 Val Gly Leu Lys Ser Ala Gln Ile His Thr Arg Val Asp Gln Leu Trp
210 100 105 110
211 Val Gln Glu Gly Gly Arg Leu Glu Ala Glu Leu Lys Tyr Thr Ala Gln
212 115 120 125
213 Ala Leu Gly Glu Ala Asp Ser Ser Thr His Gln Leu Val Ile Gln Thr
214 130 135 140
215 Ala Lys Asp Pro Asp Val Ser Leu Leu His Pro Gly Ala Leu Leu Glu
216 145 150 155 160
217 His Leu Lys Val Val His Ala Ala Thr Arg Val Thr Val His Met Tyr
218 165 170 175

```

## RAW SEQUENCE LISTING

DATE: 10/07/2004

PATENT APPLICATION: US/08/916,140

TIME: 10:36:12

Input Set : A:\CIBT-P04-203.TXT

Output Set: N:\CRF4\10072004\H916140.raw

```

219 Asp Ile Glu Trp Arg Leu Lys Asp Leu Cys Tyr Ser Pro Ser Ile Pro
220      180      185      190
221 Asp Phe Glu Gly Tyr His His Ile Glu Ser Ile Ile Asp Asn Val Ile
222      195      200      205
223 Pro Cys Ala Ile Ile Thr Pro Leu Asp Cys Phe Trp Glu Gly Ser Lys
224      210      215      220
225 Leu Leu Gly Pro Asp Tyr Pro Ile Tyr Val Pro His Leu Lys His Lys
226 225      230      235      240
227 Leu Gln Trp Thr His Leu Asn Pro Leu Glu Val Val Glu Glu Val Lys
228      245      250      255
229 Lys Leu Lys Phe Gln Phe Pro Leu Ser Thr Ile Glu Ala Tyr Met Lys
230      260      265      270
231 Arg Ala Gly Ile Thr Ser Ala Tyr Met Lys Lys Pro Cys Leu Asp Pro
232      275      280      285
233 Thr Asp Pro His Cys Pro Ala Thr Ala Pro Asn Lys Lys Ser Gly His
234      290      295      300
235 Ile Pro Asp Val Ala Ala Glu Leu Ser His Gly Cys Tyr Gly Phe Ala
236 305      310      315      320
237 Ala Ala Tyr Met His Trp Pro Glu Gln Leu Ile Val Gly Gly Ala Thr
238      325      330      335
W--> 239 Arg Asn Ser Thr Ser Ala Leu Arg Lys Ala Arg Xaa Leu Gln Thr Val
240      340      345      350
241 Val Gln Leu Met Gly Glu Arg Glu Met Tyr Glu Tyr Trp Ala Asp His
242      355      360      365
243 Tyr Lys Val His Gln Ile Gly Trp Asn Gln Glu Lys Ala Ala Ala Val
244      370      375      380
245 Leu Asp Ala Trp Gln Arg Lys Phe Ala Ala Glu Val Arg Lys Ile Thr
246 385      390      395      400
247 Thr Ser Gly Ser Val Ser Ser Ala Tyr Ser Phe Tyr Pro Phe Ser Thr
248      405      410      415
249 Ser Thr Leu Asn Asp Ile Leu Gly Lys Phe Ser Glu Val Ser Leu Lys
250      420      425      430
251 Asn Ile Ile Leu Gly Tyr Met Phe Met Leu Ile Tyr Val Ala Val Thr
252      435      440      445
253 Leu Ile Gln Trp Arg Asp Pro Ile Arg Ser Gln Ala Gly Val Gly Ile
254      450      455      460
255 Ala Gly Val Leu Leu Leu Ser Ile Thr Val Ala Ala Gly Leu Gly Phe
256 465      470      475      480
257 Cys Ala Leu Leu Gly Ile Pro Phe Asn Ala Ser Ser Thr Gln Ile Val
258      485      490      495
259 Pro Phe Leu Ala Leu Gly Leu Gly Val Gln Asp Met Phe Leu Leu Thr
260      500      505      510
261 His Thr Tyr Val Glu Gln Ala Gly Asp Val Pro Arg Glu Glu Arg Thr
262      515      520      525
263 Gly Leu Val Leu Lys Lys Ser Gly Leu Ser Val Leu Leu Ala Ser Leu
264      530      535      540
265 Cys Asn Val Met Ala Phe Leu Ala Ala Ala Leu Leu Pro Ile Pro Ala
266 545      550      555      560
267 Phe Arg Val Phe Cys Leu Gln Ala Ala Ile Leu Leu Leu Phe Asn Leu

```

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/08/916,140

DATE: 10/07/2004  
TIME: 10:36:13

Input Set : A:\CIBT-P04-203.TXT  
Output Set: N:\CRF4\10072004\H916140.raw

**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. ~~4, 5, 7, 8, 10, 11, 23, 34, 35, 36, 39, 40, 41, 45, 51, 52, 57, 61, 71, 75, 77~~  
Seq#:1; N Pos. ~~87, 88, 89, 91, 92, 96, 97, 100, 104, 106, 109, 111, 113, 117, 120, 126, 149~~  
Seq#:1; N Pos. ~~151, 153, 154, 157, 178, 187, 189, 191, 211, 214, 310, 608, 704, 708, 712~~  
Seq#:1; N Pos. ~~714, 729, 732~~  
Seq#:2; Xaa Pos. ~~4, 9, 12, 13, 14, 20~~  
Seq#:4; Xaa Pos. ~~348, 908~~  
Seq#:7; N Pos. 114, 225, 261  
Seq#:8; Xaa Pos. 75, 87  
Seq#:14; N Pos. 16, 25  
Seq#:15; N Pos. 24  
Seq#:16; N Pos. 13, 16  
Seq#:17; N Pos. 20

## VERIFICATION SUMMARY

DATE: 10/07/2004

PATENT APPLICATION: US/08/916,140

TIME: 10:36:13

Input Set : A:\CIBT-P04-203.TXT

Output Set: N:\CRF4\10072004\H916140.raw

L:48 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1  
L:49 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0  
L:50 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:60  
L:51 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:120  
L:52 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:180  
L:54 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:300  
L:59 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:600  
L:60 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:660  
L:61 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:720  
L:75 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0  
L:77 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:16  
L:239 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:336  
L:309 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:896  
L:627 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:60  
L:629 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:180  
L:630 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:240  
L:653 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:64  
L:655 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:80  
L:992 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:996 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:14  
L:997 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0  
L:1007 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1011 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:15  
L:1012 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15 after pos.:0  
L:1022 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1026 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:16  
L:1027 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0  
L:1037 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:1041 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:17  
L:1042 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0